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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/937,807	05/08/2002	Claude Annonier	3711-000116	7127

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HARNES, DICKEY & PIERCE, P.L.C.
P.O. BOX 828
BLOOMFIELD HILLS, MI 48303

EXAMINER

LAZOR, MICHELLE A

ART UNIT PAPER NUMBER

1734

8

DATE MAILED: 04/02/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

9

Office Action Summary

Application No.

09/937,807

Applicant(s)

ANNONIER ET AL.

Examiner

Michelle A Lazor

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). ____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3. 6) ☐ Other: ____

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: A brief description of the drawing is required (see 37CFR 1.74).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1 – 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dodd (U.S. Patent No. 6331210 B1) in view of Rosenberger et al. (U.S. Patent No. 5916625).

Regarding Claims 1, 4, and 8, Dodd discloses a device consisting of a diluent container or water source (32), additive containers (58 – 62); a static mixer (42); conduits communicating with said diluent container and additive container with said mixer; multiple spraying means (Figure 1), each connected to receive the output from said static mixer with a constant flow rate and to spray it at a spray zone; and means for transporting a solid product to said spray zone to receive the additive; wherein in said conduits there is a respective regulation valve (36) per liquid associated with the additive containers; there are dilution control means for controlling said regulation valve

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(36) to control the rates of flow of the additive to said mixer, said additive control means being responsive to the flow of solid product being conveyed by said transporting means to control the rate of flow of the additive in proportion to the flow of solid product; characterized in that the spray nozzle is aimed towards a conveyor (20a) for a solid product to be sprayed, and in that the control means are in the form of a microprocessor or computer controller (50) responsive to the weight of solid product present on the conveyor (Figures 1 and 3; column 3, lines 22 – 64), but does not disclose a controller being effective to vary the flow of diluent in response to the desired total flow rate of liquid to said spraying means to maintain a constant total flow rate as well as a container specifically for water. However, Rosenberger et al. disclose a controller being effective to vary the flow of diluent in response to the desired total flow rate of liquid to said spraying means to maintain a constant total flow rate (Figure; column 4, lines 12 – 50) as well as a container for a viscosity reducing agent, i.e. water (column 3, lines 39 – 50). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have a controller being effective to vary the flow of diluent in response to the desired total flow rate of liquid to said spraying means as an alternative design to varying the total flow rate and maintaining the diluent flow rate constant, and it would have been obvious to have a container for water to achieve the best control of the flow rate.

Regarding Claims 2 and 3, Dodd discloses all of the limitations of Claim 1 including several additive containers connected to said mixer (Figure 2), but does not disclose each said additive container being associated with a respective additive flow meter and

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additive flow regulation valve. However, Rosenberger et al. teach using flow meters (4 – 6) and flow regulation valves (7 – 9) for each associated additive used (Figure; column 4, lines 12 – 50). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a respective flow meter and flow regulation valve for each additive to more accurately control the total amount of additive used in the final coating material sprayed.

Regarding Claim 5, Dodd discloses several further containers communicating with a common said mixer in that the computer controller (50) modulates the proportional flow rate of each of the different additives in response to the amount of solid product (Figure 3; column 2, line 52 – column 3, line 10).

Regarding Claim 6, Rosenberger et al. disclose using an air atomizing spray device, which is known to assist in spraying. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use an air atomizing spray device to enhance the coating quality of the sprayed material.

4. Claims 1 – 6 and 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosenberger et al. in view of Dodd.

Regarding Claims 1, 4, and 5, Rosenberger et al. disclose a device consisting of a diluent container (1), additive containers (2 – 3); a static mixer (10); conduits communicating with said diluent container and additive container with said mixer; spraying means connected to receive the output from said static mixer (10) with a constant flow rate and to spray it at a spray zone; wherein in said conduits there is a respective regulation valve (36) per liquid associated with the additive containers; there

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are dilution control means for controlling said regulation valve (36) to control the rates of flow of the additive to said mixer; and a controller being effective to vary the flow of diluent in response to the desired total flow rate of liquid to said spraying means to maintain a constant total flow rate (Figure; column 4, lines 12 – 59); but do not disclose means for transporting a solid product to said spray zone to receive the additive; said additive control means being responsive to the flow of solid product being conveyed by said transporting means to control the rate of flow of the additive in proportion to the flow of solid product; characterized in that the spray nozzle is aimed towards a conveyor for a solid product to be sprayed, and in that the control means are in the form of a microprocessor or computer controller responsive to the weight of solid product present on the conveyor. However, Dodd discloses means for transporting a solid product to said spray zone to receive one or more additives; said additive control means being responsive to the flow of solid product being conveyed by said transporting means to control the rate of flow of the additive(s) in proportion to the flow of solid product; characterized in that the spray nozzle is aimed towards a conveyor (20a) for a solid product to be sprayed, and in that the control means are in the form of a microprocessor or computer controller (50) responsive to the weight of solid product present on the conveyor (Figures 1 and 3; column 3, lines 22 – 64). Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to have means for transporting a solid product, wherein there are control means responsive to the flow of additive in proportion to the flow or weight of solid product to increase efficiency of the coating system, thereby lowering coating material cost.

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Regarding Claims 2 and 3, Rosenberger et al. disclose using flow meters (4 – 6) and flow regulation valves (7 – 9) for each associated additive used (Figure, column 4, lines 12 – 50).

Regarding Claim 6, Rosenberger et al. disclose using an air atomizing spray device, which is known to assist in spraying.

Regarding Claim 8, Dodd discloses several spraying systems able to be adapted to the throughput of solid product. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use more than one spray system to ensure complete coating of the solid substrate conveyed past the spray system.

5. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dodd and Rosenberger et al. as disclosed in Claim 1 above, in view of Saidman et al. (U.S. Patent No. 5215253).

Dodd and Rosenberger et al. disclose all of the limitations of Claim 1, including Rosenberger et al. disclose a feed-forward process control system, wherein the liquid is first introduced into the regulation valve and then goes through the flow meter. However, one of ordinary skill in the art would know to use either a feed-forward or feed-backward process control system. In any event, Saidman et al. disclose a feed-backward process control system used in a spray apparatus, where the liquid is first introduced to the flow meter, and then goes through the control valve. Therefore it would have been obvious to one of ordinary skill in the art at the time of the invention to use a feed-backward process control system to improve the overall control of the spray apparatus.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michelle A Lazor whose telephone number is 703-305-7976. The examiner can normally be reached on Mon - Thurs 6:30 - 4:00, Fridays 6:30 - 3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on 703-308-3853. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.



MAL
March 31, 2003



RICHARD CRISPINO
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700